

is about \$7,200 per day. Using average values from the fitted innovation and approval delay processes estimated above, I have calculated the increase in total customer expenditure due to Opportunity Indiana based on assumed flows ranging from \$1,000 to \$10,000 per day from new services (see Table 8). The calculations show that expected expenditure increases by anywhere from \$18M to \$182M under Opportunity Indiana. Assuming the average service revenue during Opportunity Indiana, expected spending increases by \$131M. Consumers making this expenditure therefore value the incremental benefits from the new services at *more* than \$131M.

I emphasize that this is only an estimate, involving several simplifying assumptions (e.g., there is no discounting and I assume that expenditure begins immediately after approval). But even so, the magnitude of the effect is very large and would not vanish by changing these assumptions. By comparison, actual spending on Ameritech Indiana's local services (the category for these new services) in 1994 was \$534M and from all sources was \$1,160M.

D. Promotional Offerings Under Opportunity Indiana

This brief section characterizes promotional offerings ("promos") under Opportunity Indiana. Promos typically take the form of a waiver of charges (recurring or non-recurring) associated with a telecommunications service for a limited time, and are one example of marketing innovations made feasible by Opportunity Indiana. Before Opportunity Indiana, promos that waived charges for new subscribers were not allowed at all. Sixty-five promos have been approved during Opportunity Indiana, compared with *none* for the three years before Opportunity Indiana (see Appendix 7).

The Frequency of the Promotional Offerings

The 65 promos were offered fairly uniformly over the three years of Opportunity Indiana, although there were somewhat fewer in the final year (14 were offered in the July 1996 to June 1997 period, compared to the average of 21.7 per year). Figure 5 depicts the number of offerings broken down into six month periods. The peak number of promos, 18, was offered in the first half of 1995. Ameritech was not allowed to offer promos before Opportunity Indiana.

The Expedited Approval of the Promotional Offerings

The tariffs for most promos were filed under a one-day minimum approval process, a streamlined approach introduced by Opportunity Indiana. Seven of the 65 were filed under a three-day and one under a 21-day minimum approval process. Over three-fifths of the promo tariffs were submitted and approved within the minimum approval periods. Ameritech submitted the rest before the desired date of effectiveness, so that tariff effectiveness may have taken a few days beyond the minimum. In no case was a promo delayed by regulators, and every tariff was approved within six business days after the minimum period. Compare this expedited performance with new service introductions under Opportunity Indiana, where fewer than half of the tariffs were approved without delay and approval for two tariffs was delayed longer than two months. Compare this

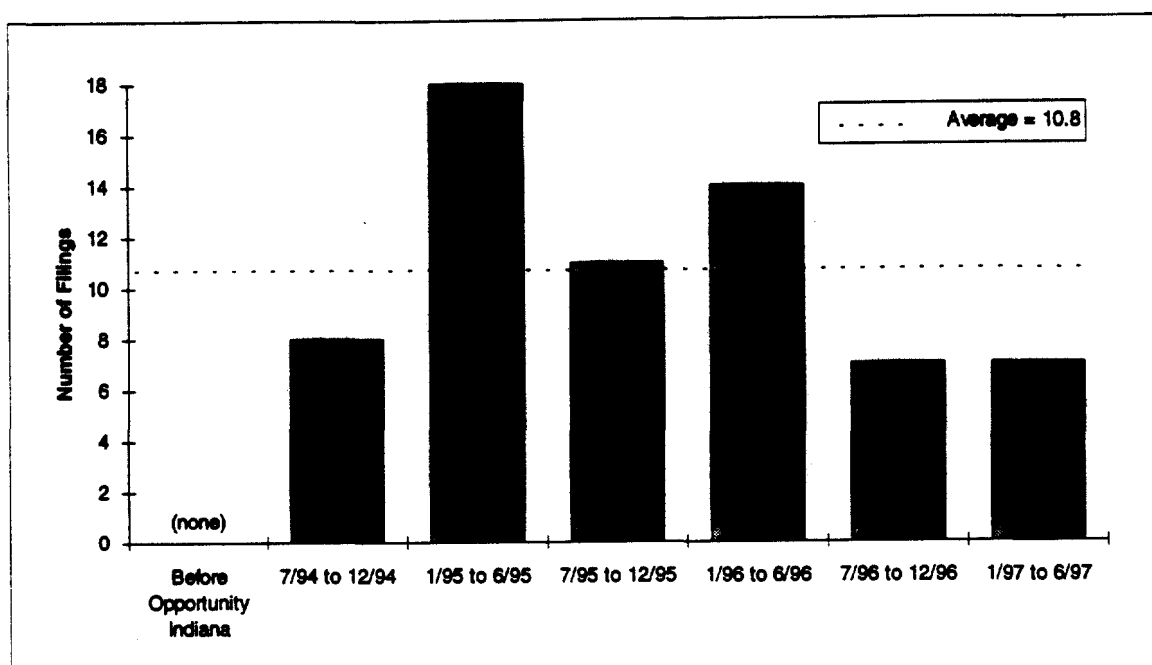


Figure 5: Promotional Offerings Under Opportunity Indiana

speedy approval process also with the years before Opportunity Indiana, in which approval delay was essentially *infinite* (because promos were not allowed).

Opportunity Indiana, by lowering the regulatory hurdles for offering price reductions, gave Ameritech the chance to offer many promotional offerings. The promos increased consumer welfare by attracting customers who would not have purchased the services otherwise and by reducing the price for subscribers who would have purchased them anyway. The streamlined tariff approval process ensured that consumers did not have to wait unduly long to begin accruing these benefits.

E. Conclusion

This final part of the study provides a striking picture of the benefits to consumers following from more flexible regulation. The model estimates that Opportunity Indiana spurred three times the number of services to be introduced each year. New promotional offerings to consumers under Opportunity Indiana were not even allowed before. Delays to introduction were cut to a minimum under the new program, which increased the attractiveness to the company of offering new services. Consumers were able to enjoy more products, and to enjoy them much quicker than before. The benefit to consumers from the new services alone (not including the promos) is estimated to be at least \$131M for the three year period after the introduction of Opportunity Indiana.

Appendix 1: Statistical Methodology

A. The Innovation Model

The first step in the analysis is the creation of new services—what I term *innovation* in this study. Typically economists analyze such data in the form of counts (numbers of events per year). One standard model for count data is the Poisson. The interval between events in a Poisson stochastic process are independent exponentially distributed; thus one can take the interarrival times as the observations of interest and fit them to an exponential duration model. This leads to the observation that *any* interarrival time distribution is associated with a count model. The Poisson count model may be overly restrictive. Since econometricians are more familiar with duration models than with count models, it makes sense to relax the Poisson assumption by experimenting with alternative interarrival durations. I model the interarrival times as having a Weibull distribution, which nests the exponential distribution as a special case.

One potential problem concerns measuring the arrival of new telecommunications services. Since I cannot determine exactly at what point a service becomes technically feasible, I must take the date of application for a new tariff (or CEI plan filing) as the time of innovation of the service. Thus I will only be counting those services that are considered by the company to, first, have a chance of being approved, and, second, be worth spending the money on to go through the regulatory process.

To derive the likelihood of a sample of Weibull interarrival times, begin by considering the density of a single Weibull duration t :

$$f(t) = \lambda p (\lambda t)^{p-1} \exp[-(\lambda t)^p] \quad t > 0$$

The Weibull distribution has two parameters: p , the *shape*, and λ , the *scale*. When the shape is unity, the Weibull distribution reduces to the exponential distribution. Typically the scale is modeled as an index function of covariates; I take $\lambda_i = \exp(-\beta'x_i)$, where x is a vector of covariates relating to observation (interarrival time) i .

In econometric duration models the covariates are often assumed to be fixed at the onset of the duration, remaining constant for the length of the duration. In my data some of the interarrival times can be well over a year, and I want to allow λ to vary over the duration. Accordingly, I will allow covariates to change the hazard rate contemporaneously. Since the variables I will use are reported annually, they will cause the hazard rate to change discontinuously from year to year. Thus what I term a *straddling duration*, one that begins in one calendar year and ends in another, has a discontinuous hazard rate and requires special care. To derive the likelihood of such an observation, I first state some

standard results relating probabilities, densities, and hazard rates. Let $h(t)$ be the hazard rate at time t and $H(t)$ be the integrated hazard. Then:

$$\begin{aligned} F(t) &= 1 - \exp(-H(t)) & f(t) &= h(t) \exp(-H(t)) \\ H(t) &\equiv \int_0^t h(s) ds & h(t) &\equiv \frac{f(t)}{1-F(t)} \end{aligned} \quad (1)$$

For a discontinuous hazard rate, the integral in $H(t)$ can be split into integrals over the continuous regions of h . Let duration t be such that $h(s)$ has a discontinuity at $t_1 < t$. The interpretation is that the first part of the duration, of length t_1 , takes place in one year and the rest in the next year. From (1), such a duration has likelihood:

$$f(t) = h_2(t) \exp\left(-\int_0^{t_1} h_1(s) ds - \int_{t_1}^t h_2(s) ds\right) \quad (2)$$

where $h_i(s)$, $i = 1, 2$, is the hazard function in period 1 (the originating year) or period 2 (the completing year). Equation (2) can be rewritten as

$$f(t) = \exp\left(-\int_0^{t_1} h_1(s) ds\right) \cdot \frac{h_2(t) \exp\left(-\int_0^{t_1} h_2(s) ds\right)}{\exp\left(-\int_0^{t_1} h_2(s) ds\right)} = \underbrace{[1 - F_1(t_1)]}_{\text{prob. of lasting at least as long as } t_1 \text{ under hazard } h_1} \cdot \underbrace{\frac{f_2(t)}{[1 - F_2(t_1)]}}_{\text{prob. of ending at } t \text{ under hazard } h_2 \text{ given lasted until } t_1}, \quad t > t_1 \quad (3)$$

The first term on the RHS of (3) is the likelihood of a censored observation of length t_1 . The second term has the form of a truncated density, and will be equivalent to $f_2(t-t_1)$ if f is exponential.

For the Weibull distribution, then, the likelihood of a set of observed times is

$$\begin{aligned} L(\beta) &= \prod_{i \in I_1} \lambda_i p(\lambda_i t_i)^{p-1} \exp[-(\lambda_i t_i)^p] \prod_{i \in I_2} \exp[-(\lambda_i t_i)^p] \\ &\quad \prod_{i \in I_3} \lambda_i p(\lambda_i [t_{i-1} + t_i])^{p-1} \exp[(\lambda_i t_{i-1})^p - (\lambda_i [t_{i-1} + t_i])^p]; \\ \lambda_i &\equiv \exp(-\beta' x_i) \end{aligned} \quad (4)$$

where the observations are ordered by calendar time, straddling durations are split into two "observations" as in (3), I_1 is the index set of complete (i.e., non-straddling) durations, I_2 is the index set of any censored durations and of the initial-calendar-year part of straddling durations, and I_3 is the index set of the completing-calendar-year part of straddling durations. I perform maximum likelihood estimation on the log of (4). Neither the Weibull nor the exponential distributions allow for a closed form solution due to the censoring and truncation in the likelihood, so estimation proceeds by numerical methods. The extension to panel data is straightforward.

To test the validity of the exponential duration assumption in this framework, one conducts a two-sided test of the hypothesis that $p = 1$.

B. The Introduction Delay Model

The length of delay between the tariff filing and approval is the regulatory delay model. This is also a duration process, and I model it as in the previous section, with the adjustment that an entire duration t is broken up into a deterministic part t_d and a stochastic part t_s . The regulatory process sets t_d . For example, new services in the federal access tariff are currently eligible for approval after a 15 day delay, so $t_d = 15$ days. The (uncertain) additional delay, t_s , is modeled as a draw from a Weibull duration process. When the deterministic part is known, as in the federal access tariff data, analysis proceeds by subtracting t_d from t and performing the statistical procedures on this "adjusted delay time". When t_d is not known with certainty, as in the CEI data, I introduce it into the likelihood equation as a parameter to be estimated.

In some of the data sets below there are many observations with t_s equal to zero. A pure Weibull process is inappropriate; the probability of such events is zero. To extend the Weibull model for such cases I propose a *selected for delay* (SFD; my term) model. In the SFD model each tariff filing is first "selected" to be delayed or is approved without delay (beyond t_d). Selection of filings is a function of observable characteristics of the filing, the regulatory regime, and a random component. Those filings selected for delay then enter a Weibull duration process to determine time remaining until approval. The error in the selection equation is not deemed to be correlated with the subsequent duration process (there is no selection bias issue because there are no unobserved delays; delays observed to be zero do not mask a non-zero "latent delay"). Therefore the selection equation can be estimated via probit methods and the duration parameters can be estimated separately.

Appendix 2: Expenditure Projection Exercises

A. Expenditure as a Lower Bound on Gross Consumer Benefits

Welfare gains due to price caps cannot be measured without estimating demand for the various services introduced. The data needed to accurately estimate demand is not yet available; these are *new* services. However, it is possible to estimate the increase in consumer expenditure on new services due to price caps. Consumer welfare is proportional to the expenditure for constant elasticity demand functions, and is positively correlated for most other demand functions. The constant of proportionality is $k/(-E-1)$, where E is the elasticity of demand and k is the scale parameter of the CED function, and unfortunately cannot be determined without estimating demand.

At a more basic level, customer expenditure (which is the same as revenue to the firm) provides a lower bound to the gross benefits accruing to consumers. For example, if consumers spend \$5M on a new service in a year, then we know that the benefits they enjoyed from the service were *at least* \$5M, and potentially much larger.

B. Federal Access Tariff Filings

For this exercise I assume that the expenditure per year from a new service is \$1.68M. This figure is the average first-year revenue from a new service, as reported in the tariff transmittal supporting documentation sent to the FCC by Ameritech. I take this figure to be the expenditure for each year after introduction of a service in the exercise. The (undiscounted) sum of all service revenues can be expressed as

$$R = \sum_{i=1}^n R_i (T - t_i - \bar{\delta} - \delta_i), \quad (5)$$

where R_i is revenue per new service per year, T is total length of period, t_i is time of i th service filing, $\bar{\delta}$ is the certain part of the delay, and δ_i is random part of the delay of i th service filing. All times are in years.

To project total revenue under the price cap and non-price cap hypotheses, take the mathematical expectation of (5) given the estimated parameters of the innovation and approval delay models. The expected revenue formula is:

$$E(R) = T\lambda \cdot R_i \left(T - \bar{t} - \bar{\delta} - \frac{pr(\text{delay})}{\gamma} \right),$$

where \bar{t} is $T/2$, the average arrival time, $1/\gamma$ is the average delay when delayed (calculated from the tariff delay estimation model), and λ is average number of services per year (calculated from the service innovation model). The results are reported in the text in Table 8.

C. Opportunity Indiana

The methodology used here is somewhat different than that described in the previous section. To estimate revenue during a period, I assumed that there would be the estimated average number of services and that they would be equally spaced within the period. Each service was taken to be delayed the average number of days. Revenue for a service was assumed to flow starting the day of tariff approval until the end of the period.

From these assumptions total revenue-days can be calculated with the following formula:

$$\sum_{n=1}^N 1095 - d(n - \frac{1}{2}) - m_i = N(1095 - m_i) - \frac{1}{2}dN^2$$

where 1095 is the number of days in a three year period, d is the average interarrival time of new services, N is the number of new services in a period, and m_i is the average delay time in period i . Revenue-days were then multiplied by the assumed revenue per service per day figures to obtain total revenue for the period. The results are reported in the text in Table 8.

Appendix 3: Results of Statistical Estimations

This Appendix contains further details of the outcome of the statistical estimations performed.

A. CEI Filings

Innovation

I first check the comparability of the initial CEI regime (up to 1992) and the current one (since 1995). If the two periods appear to be comparable (in terms of the innovative process) then I can pool the observations in the estimation. The p-value of a dummy variable for the current CEI regime (which marked all filings since 1995) was 0.597 (the t statistic was -0.529), which is not statistically significant at any reasonable level. Thus there appears to be no structural change between these two periods, and I will pool the observations from both periods.

The results from the exponential duration model regression performed on the interarrival times of new services follow.

Coefficients:

	<u>Value</u>	<u>Std. Error</u>	<u>t_stat</u>	<u>p_value</u>
(Intercept)	5.262	0.333	15.79	3.39e-056
rbocAmeritech	0.737	0.460	1.60	1.09e-001
rbocB.Atlantic	0.477	0.421	1.13	2.57e-001
rbocBellSouth	0.767	0.448	1.71	8.67e-002
rbocNYNEX	1.208	0.517	2.34	1.94e-002
rbocPacBell	0.998	0.475	2.10	3.55e-002
rbocSWBT	0.500	0.429	1.17	2.44e-001
rbocUSWest	1.323	0.548	2.41	1.58e-002
amendment	1.097	0.292	3.75	1.75e-004
waiver	1.672	0.316	5.30	1.18e-007

Log likelihood: -250

From the estimation, we generate the estimated yearly new plans and amendments by calculating the theoretical average from the estimated coefficients. The theoretical average number of services per year is

$$(365 \text{ days per year}) * [\exp(-x'b) \text{ services per day}]$$

where b are the coefficients estimated above. Sum up the different types of services for an RBOC and one gets the figures reported in the first column of Table 2.

To get the predicted number of new services during the interim under the CEI regime (as reported in the second column of Table 2, multiply the first column by the length of the

interims for each RBOC. The lengths (the period of time between the waiver of structure separations requirements and the reinstatement of the CEI regime) for the RBOCs were:

RBOC	ONA Plan		# years
	Approved	Remand	
Ameritech	6/15/92	1/11/95	2.574
Bell Atlantic	6/8/92	1/11/95	2.593
Bell South	7/14/93	1/11/95	1.495
NYNEX	12/16/92	1/11/95	2.07
PacBell	5/21/93	1/11/95	1.643
Southwestern Bell	11/2/92	1/11/95	2.19
US West	6/9/92	1/11/95	2.59

Approval Delays

Table 3 in the text contains the parameter estimates. The log likelihood of the estimation is -372.172. The change in average delay is calculated as the change in the Weibull mean due to the particular coefficient. The change in the Weibull mean due to b_i is

$$\frac{[\exp(x'b) - \exp(x'b_{-i})]\Gamma(1/p)/p}{\exp(x'b_{-i})\Gamma(1/p)/p} = \exp(x_i b_i) - 1$$

B. Federal Access Tariff Filings

Innovation

Table 4 in the text contains the parameter estimates. The log likelihood of the estimation is -182. Average estimated arrivals per year per category are calculated as described in section A above.

Approval Delays

The results are in Table 5. The probit selection equation regression had a null deviance of 127.0173 on 94 degrees of freedom and a residual deviance of 94.23908 on 88 degrees of freedom. The exponential delay process had a fitted log likelihood of -55.3.

C. Opportunity Indiana Filings

Innovation

In an initial estimation explored the significance of economic, financial, and demographic variables. The results were:

<u>Parameter</u>	<u>Estimate</u>	<u>Standard Error</u>	<u>t-statistic</u>
B0	-10368.2	4975.89	-2.08370
B1OI	-2.37792	1.21078	-1.96396
B2LT	4.69456	29.6811	0.15817
B3PP	541.502	276.015	1.96186
B3PC	-126.094	72.5713	-1.73752
B4PM	-3.76833	3.22109	-1.16989
B4RD	7.28248	5.89571	1.23522
B4LG	12.0325	13.0486	0.92213
P	.867824	.094829	9.15145

NUMBER OF OBSERVATIONS = 59

The coefficients are:

b1OI	OI dummy variable
b2lt	log total number of lines in IN
b3pp	log population in IN
b3pc	log per capita income in IN
b4pm	log product management expenditure by Ameritech Indiana, lagged
b4rd	log R&D expenditure by Ameritech Indiana, lagged
b4lg	log legal expenditure by Ameritech Indiana, lagged

A test of the joint significance of b2lt, b3pp, b3pc, b4pm, b4rd, and b4lg had a χ^2 statistic of 6.988958, with an upper tail area of 0.32187. Therefore we can't reject the null hypothesis that they are all equal to zero (i.e., have no significant effect).

The estimation results underlying Table 6 are as follows.

<u>Parameter</u>	<u>Estimate</u>	<u>Standard Error</u>	<u>t-statistic</u>
intercept	4.45079	0.344175	12.9318
Opportunity Indiana	-1.17111	0.392077	-2.98694
p (Weibull shape)	0.844732	0.094779	8.91266

LOG OF LIKELIHOOD FUNCTION = -230.537
NUMBER OF OBSERVATIONS = 59

Standard Errors computed from analytic second derivatives
(Newton)

Approval Delays

For the first-round selection model, I use a simple binomial model. In the binomial model, there is a fixed probability that a filing will be delayed (I allow the probability to change during the Opportunity Indiana period). The MLE estimate of the binomial probability is the fraction of observations that are delayed (1.0 for the first period, 0.47 for the second).

The exponential delay estimation (when services are delayed) output follows.

<u>Coefficients</u>	<u>Value</u>	<u>Std. Error</u>	<u>t-stat.</u>	<u>p-value</u>
(Intercept)	4.005	0.278	14.43	3.37e-047
opp.ind	-1.724	0.364	-4.73	2.24e-006
ave.in.proc	0.429	0.149	2.87	4.12e-003

Log likelihood = -55

The *ave.in.proc* variable is the de-meaned average number of filings in process during the approval delay of a filings. The percentage effect on the mean delay from one additional filing in process during the approval delay is:

$$\frac{[\exp(\bar{x}'b + b_{ave.in.proc}) - \exp(\bar{x}'b)]}{\exp(\bar{x}'b)} = \exp(b_{ave.in.proc}) - 1 = 53.57\%$$

To get the predicted approval delays, note that the average fitted delay in the sample for the pre-Opportunity Indiana period is

$$\text{average delay before OI} = \frac{1}{n} \sum_{i=1}^n \left(30 + \frac{7}{5} \lambda_i^{-1} \right)$$

where the 30 comes from the minimum delay time, $7/5$ comes from adding weekends back in to the random delay time, $\lambda_i = \exp(-\beta'x_i)$, where x is the vector of covariates relating to observation i , and n is the number of observations in the period. To get the predicted approval delay days for the Opportunity Indiana period, use

$$\text{average delay during OI} = \frac{1}{m} \sum_{i=1}^m \left(1 + [\text{probability of delay}] \frac{7}{5} \lambda_i^{-1} \right)$$

where the 1 comes from the minimum delay time, m is the number of observations in the period, and all else is as before. The formulae generate the predictions of 132.08 delay days for the period before Opportunity Indiana and 7.91 delay days for the period during Opportunity Indiana.

Appendix 4: List of CEI Plans

This appendix contains the CEI plans, amended plans, and waiver requests used in the statistical work.

CEI Plan	Date Filed	Date Approved or Withdrawn	Approved	"Me Too" Filing	Reference
Ameritech					
Interactive Audiotex Svcs	3/23/89	9/21/89	Yes	No	4 FCC Rcd 6925
Enh Protocol Processing Svcs	11/6/89	5/24/90	Yes	No	5 FCC Rcd 3231
Alarm Monitoring	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Fast Packet Data Svcs	3/13/95		No ¹	No	10 FCC Rcd 13758
Fax Store and Forward	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Interactive Voice Response Svcs	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Internet Access Svcs	3/13/95		No ¹	No	10 FCC Rcd 13758
Voice Mail Messaging	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Message Delivery Svc	6/11/95	12/15/95	Yes	No	11 FCC Rcd 5590
Personal Access Svc (PAS)	9/1/95	6/4/97	No	No	DA 97-1171
Voice Mail Messaging - minor amendment	8/22/96	10/28/96	No	No	
Fax SF - Amended	9/27/96	12/4/96	Yes	No	verbal to company
Reverse Search (wvr)	10/25/96	3/24/97	Yes	Yes (USW, BS, SWBT)	1997 FCC LEXIS 1533
Voice Mail Messaging - supplement to minor amendment	10/28/96	11/14/96	Yes	No	11 FCC Rcd 14624
Payphone Svc	11/27/96	4/15/97	Yes	No	12 FCC Rcd 4238
Electronic Vaulting Svc	2/27/97	12/31/97	Yes	No	CCD Pol 97-03
Bell Atlantic					
Message Storage	3/6/87	2/18/88	Yes	No	3 FCC 1108
Message Storage - Amended	3/21/88	5/23/88	Yes	No	3 FCC Rcd 3552
Coin Messaging - waiver	4/1/88	9/29/88	Yes	No	3 FCC Rcd 5741
Intellgate/Videotex Gateway	3/30/88	9/30/88	Yes	No	3 FCC Rcd 6045
Voice Messaging Svc	3/30/88	9/30/88	Yes	Yes (PB)	3 FCC Rcd 5772
IVG - Amended	10/11/88	1/30/89	Yes	No	4 FCC Rcd 1192
Protocol Processing Svcs	12/21/88	3/31/89	Yes	No	4 FCC Rcd 2744
Electronic Data Interchange Svcs	1/30/89	6/9/89	Yes	No	4 FCC Rcd 4758
Data Processings & Storage Svcs	6/6/89	12/13/89	Yes	No	4 FCC Rcd 8579
Radio-Based Enhanced Svcs	3/22/90	7/27/90	No	No	DA 90-683
Coin Messaging Delivery Svc- wvr	2/12/91	6/4/91	Yes	Yes (BA VMS)	6 FCC Rcd 3400
Enhanced Video Svcs	1/27/95	6/9/95	Yes	No	11 FCC Rcd 985
Protocol Processing Svcs - amendment	3/13/95	10/31/95	Yes		10 FCC Rcd 13758
Internet Access Svc	3/8/96	6/6/96	Yes	No	11 FCC Rcd 6919
Payphone Svc	1/6/97	4/15/97	Yes	No	12 FCC Rcd 4275
Internet Access Svc - amendment	5/5/97		No	No	

CEI Plan	Date Filed	Date Approved or Withdrawn	Approved	"Me Too" Filing	Reference
BellSouth					
Voice Messaging Svc	3/18/88	8/31/88	No		3 FCC Rcd 7284
Gateway Svcs	4/20/88	11/2/88	No		3 FCC Rcd 6843
VMS - amended	8/31/88	12/23/88	Yes	No	3 FCC Rcd 7284
Coin Messaging - waiver	10/7/88	2/15/89	Yes	Yes (BS VMS and BA CMS)	6 FCC Rcd 6544
Synchronous Protocol Processing Svcs	8/19/88	2/15/89	Yes	No	4 FCC Rcd 1560
Gateway Svcs - amended	11/2/88	3/30/89	No	No	4 FCC Rcd 3450
Gateway Svcs - further amended	3/30/89	5/25/89	Yes	No	4 FCC Rcd 4524
Synchronous Protocol Processing Svcs - amendment	5/24/89	9/14/89	Yes	No	4 FCC Rcd 6825
Account Code Billing (wvr)	3/7/91	5/27/92	Yes	No	7 FCC Rcd 3504
VMS - amended	6/1/93	7/14/93	No	No	
Gateway Svcs - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
SPPS - amendment	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
VMS - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Reverse Search (wvr)	3/1/96	7/3/96	Yes	Yes (USW)	11 FCC Rcd 7997
Payphone Svc	11/22/96	4/15/97	Yes	No	12 FCC Rcd 4318
Gateway Svcs - amended	8/26/97		No	No	DA 97-1908
SPPS - amendment	8/26/97		No	No	DA 97-1908
NYNEX					
Info-Look/Videotex Gateway (wvr)	5/11/88	10/5/88	Yes	No	3 FCC Rcd 6055
Voice Messaging Svc	6/21/88	1/12/89	Yes	Yes (PB)	4 FCC Rcd 554
Protocol Processing Svcs	5/17/89	1/4/90	Yes	No	5 FCC Rcd 56
Electronic Info Svcs.	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
VMS - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Audiotext Info Svcs	7/28/95	1/23/96	Yes	No	11 FCC Rcd 2419
Custom Announcement Svcs	7/28/95	1/23/96	Yes	No	11 FCC Rcd 2419
Remote Data Processing Svcs	7/28/95	1/23/96	Yes	No	11 FCC Rcd 2419
Payphone Svc	1/3/97	4/15/97	Yes	No	12 FCC Rcd 4755
Pacific Bell					
Voice Mail Svc	7/2/87	2/18/88	Yes	No	3 FCC Rcd 1095
VMS - amended	3/21/88	5/23/88	Yes	No	3 FCC Rcd 3552
Electronic Messaging Svcs	6/20/88	2/21/89	Yes	No	4 FCC Rcd 1640
Videotex Gateway svc	9/23/88	4/7/89	Yes	No	4 FCC Rcd 2774
Voice S&F Svc	11/18/88	5/22/89	Yes	No	4 FCC Rcd 4491
Protocol Conversion Svcs	3/19/90	10/25/90	No	No	5 FCC Rcd 2502
Protocol Conversion Svcs - amended	3/19/92	5/21/93	No	No	
VMS - amended	5/1/92	5/29/92	Yes	Yes (previous)	7 FCC Rcd 3487

CEI Plan	Date Filed	Date Approved or Withdrawn	Approved	"Me Too" Filing	Reference
Pacific Bell (cont.)					
EMS - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Enhanced Protocol, Code, and Format Conversion Svc	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Fax Store and Forward	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Videotex gateway svc - amendment	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
VMS - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Voice S&F - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Payphone Svc	12/26/96	4/15/97	Yes	No	12 FCC Rcd 4793
SWBT					
Voice Messaging Svcs	4/1/88	9/29/88	Yes	Yes (PB)	3 FCC Rcd 6912
Gateway (wvr)	8/24/88	1/30/89	Yes	No	
Protocol Conversion Svcs	12/31/88	3/9/89	Yes	No	4 FCC Rcd 2236
VMS - amended	4/17/90	7/23/90	Yes	No	5 FCC Rcd 3529
Payment Processing Svcs	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
PCS (Amendment)	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
VMS - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Fax Svc	8/3/95	5/7/96	No	No	11 FCC Rcd 7041
Internet Access Svc	8/3/95	1/11/96	Yes	No	
Fax Svc - Minor Amendmnt	5/7/96	6/11/96	Yes	No	11 FCC Rcd 7041
PC Backup & Recovery	8/3/95	6/11/96	Yes	No	11 FCC Rcd 7041
Reverse Search (wvr)	1/16/96	7/1/96	Yes	Yes (USW)	11 FCC Rcd 7997
Basic Payphone	12/30/96	4/15/97	Yes	No	12 FCC Rcd 5857
Interactive Call Manager	8/15/96	5/8/97	Yes	No	DA 96-1413
Security Svc	4/4/96	5/16/97	Yes	No	1997 FCC LEXIS 2597
Internet Support Svcs	6/21/96	5/22/97	No	No	DA 96-1031
Internet Support Svcs	5/22/97		No	No	
Payphone - Minor Amendmnt	7/11/97		No	No	
U S West					
Voice Messaging Svcs	5/13/88	1/13/89	Yes	Yes (PB)	4 FCC Rcd 572
Protocol Processing Svcs	2/24/89	7/13/89	Yes	No	4 FCC Rcd 5512
VSF	10/24/89	6/6/90	No	No	4 FCC Rcd 8500
FAX SF	12/15/89	6/6/90	No	No	4 FCC Rcd 1043
Audiotex	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Enh Fax Svcs	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Electronic Messaging Svcs	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
On-Line DB access	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
PPS - Amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
VMS - amended	3/13/95	10/31/95	Yes	No	10 FCC Rcd 13758
Reverse Search (wvr)	4/4/94	11/6/95	Yes	No	11 FCC Rcd 1195
VMS - amended	9/13/96		No	No	
Payphone	1/6/97	4/15/97	Yes	No	12 FCC Rcd 4837

CEI Plan	Date Filed	Date Approved or Withdrawn	Approved	"Me Too" Filing	Reference
AT&T					
Subaccount Billing Svcs - wvr	6/10/87	8/19/87	Yes	No	2 FCC Rcd 6723
Transaction Svcs	10/26/87	5/11/88	Yes	No	3 FCC Rcd 2702
CODEC conversion	12/18/87	7/29/88	Yes	No	3 FCC Rcd 4683
FTS 2000	1/24/89	6/15/89	Yes	No	4 FCC Rcd 4865
Enhanced Svcs complex	3/30/89	9/13/89	Yes	No	4 FCC Rcd 6974
DIAL IT 900 Svc Call Count Arrangements (wvr)	8/18/89	10/6/89	Yes	No	4 FCC Rcd 7581
Enhanced Packet Svcs	6/23/89	2/2/90	Yes	No	5 FCC Rcd 651
Transaction Svcs - Amended	6/7/90	12/18/90	Yes	Yes (original)	5 FCC Rcd 7589
ESC - supplemental	4/5/90	1/18/91	Yes	Yes	6 FCC Rcd 357
ESC - amended	2/13/91	8/8/91	Yes	Yes (original)	6 FCC Rcd 4839
SPECS Enh. Svcs - wvr	10/31/91	8/27/93	Yes	No	8 FCC Rcd 6808

Notes:

I Ameritech's Internet Access Service and Fast Packet Data Service have not been approved because of a disagreement between the FCC and the company concerning the classification of an underlying service as basic or enhanced. These cases highlight that one should not necessarily assign blame for the "approval delays" to the FCC— if Ameritech agreed to the FCC's position it is probable that the services would have been approved by now. The fault for the delays lies most directly with the regulatory regime itself; it is the regime that necessitates such arguments over arbitrary classifications.

Appendix 5: List of New Services in Ameritech's Federal Access Tariff

Following are the new services introduced (or attempted to be introduced) into the FCC Tariff No. 2 (federal access tariff for the Ameritech Operating Companies). The list is complete from the beginning of the consolidated tariff (1984) through June 1997. The list includes only those ICBs that were the first occurrence of a service.

Trans- mittal No.	Access Service	Category	Date of Filing	Date of Approval	Delay	No. of Refilings	Approved	Estimated First Year Revenue	Estimated First Year Cost
3	Charge a Call Plus Data Transmission et al	Other	2/25/85	4/1/85	35	0	Yes	NA	NA
5	Billing svcs	Other	5/16/85	7/1/85	46	0	Yes	1,139,400	NA
20	Illinois DS3 Cross Connects (ICB)	Special	8/7/86	9/21/86	45	0	Yes	NA	NA
21	Illinois DS3 (ICB)	Special	8/7/86	9/21/86	45	0	Yes	NA	NA
46	Switched Access Shared Use	Switched	12/8/86	1/12/87	35	0	Yes	de minimus	de minimus
50	Secondary Channel Capability	Special	12/29/86	2/27/87	60	1	Yes	29,000	de minimus
56	WATS FG A/B	Switched	1/20/87	2/18/87	29	1	Yes	NA	NA
67	Software Network Capability (SNC) Access Service	Switched	3/2/87	7/15/87	135	3	Yes	171,000	169,500
79	Billing for FGB/FGD	Other	4/22/87	5/27/87	35	0	Yes	de minimus	de minimus
87	900 Access Service	Switched	5/6/87	7/5/87	60	1	Yes	200,000	NA
89	Packet Switched Network (PSN) Service	Other	5/11/87	7/10/87	60	1	Yes	NA	NA
116	FG B DAL	Switched	7/31/87	8/1/87	1	0	Yes	0	0
120	Illinois DS3; 56Kbps; diversity (ICB)	Special	8/14/87	9/30/87	47	0	Yes	NA	NA
124	PSDS for OH and WI	Switched	8/26/87	10/24/87	59	2	Yes	37,360	NA
145	IAD and IEDD	Special	12/11/87	3/10/88	90	2	Yes	247,027	250,391
227	FG D with 950 Access	Switched	10/4/88	11/8/88	35	0	Yes	0	de minimus
291	Voice Gateway Interface Svc (VGIS)	Switched	3/28/89	7/24/89	118	6	Yes	1,230,400	NA
314	Line-Powered Data Station Termination (DST)	Special	6/6/89	7/11/89	35	0	Yes	7,947	7,947
361	Clear Channel Capability for DS1	Special	8/30/89	10/14/89	45	0	Yes	618,450	471,638

Trans- mittal No.	Access Service	Category	Date of Filing	Date of Approval	Delay	No. of Refillings	Approved	Estimated First Year Revenue	Estimated First Year Cost
396	SS7 Signal Transfer Point (STP)	Switched	11/21/89	1/1/92	771	23	Yes	1,465,930	1,134,737
425	Operator Transfer Service	Switched	2/16/90	3/6/91	383	10	Yes	3,256,506	3,256,506
463	OPTINET Base Rate	Special	7/16/90	10/14/90	90	1	Yes	3,584,835	3,061,237
480	SS7 Feature Group D	Switched	10/18/90	2/13/92	113	9	Yes	0	0
483	800 Database - 10 digit ID	Switched	10/31/90	2/2/91	94	2	No	216,079	197,795
488	Special Facilities Routing of Access Services	Other	11/9/90	2/7/91	90	1	Yes	842,884	803,969
499	ONA - New Services	Switched	12/18/90	12/31/91	378	10	Yes	102,755	93,619
504	DS-3 LDCs w/ Optical Interface	Special	12/28/90	2/11/91	45	0	Yes	1,390,451	582,723
509	SMDI - E	Other	1/16/91	12/31/91	349	9	Yes	36,358	32,802
510	OPTINET 56Kbps - DAL	Special	1/31/91	3/17/91	45	0	Yes	379,233	152,837
518	OPTINET 64Kbps	Special	2/19/91	6/20/91	121	3	Yes	-59,911	78,858
526	Flex ANI	Switched	4/2/91	12/31/91	273	7	Yes	172,436	209,179
555	Ameritech Directory Search	Other	8/15/91	2/13/92	90	5	Yes	767,502	629,926
557	ONA	Switched	8/23/91	12/31/91	130	4	Yes	26,513,085	16,390,840
562	Ameritech OPTINET Reconfiguration Svc	Special	9/13/91	12/12/91	90	2	Yes	271,732	178,144
575	Line Info Database (LIDB)	Switched	11/12/91	1/1/92	50	3	Yes	6,032,980	2,374,542
609	Alarm DNAL	Special	2/21/92	3/8/92	16	2	Yes	2,332	1,783
611	0 + 900 Option	Switched	3/9/92	4/23/92	45	0	Yes	451,243	423,559
621	OPTINET Integrated Communications Service	Special	4/29/92	8/25/92	118	3	No	553,899	564,501
646	OPTINET 384 Kbps	Special	7/31/92	9/14/92	45	0	Yes	98,100	88,710
650	64 Clear Channel Capability	Switched	8/20/92	10/19/92	60	1	Yes	0	0
653	DS3 LDC Package 24 w/ an Electrical Interface	Special	8/24/92	10/8/92	45	0	Yes	3,807,227	2,223,530
660	FG A Call Screening	Switched	9/25/92	11/9/92	45	0	Yes	0	0
667	Shared Network Arrangement	Special	10/28/92	12/12/92	45	0	Yes	5,250	4,457
672	International Call Blocking	Other	11/12/92	12/27/92	45	0	Yes	1,120,144	927,992
676	DS0 Fiber Hub Cross-Connects	Special	11/24/92	1/8/93	45	0	Yes	9,750	8,910
690	Ameritech Switch to Computer Applications Interface (ASCAI)	Other	1/19/93	3/5/93	45	0	Yes	36,495	NA

Trans- mittal No.	Access Service	Category	Date of Filing	Date of Approval	Delay	No. of Refillings	Approved	Estimated First Year Revenue	Estimated First Year Cost
696	Directory Assistance Branding	Other	2/12/93	3/29/93	45	0	Yes	31,850	31,789
701	800 Database	Switched	3/30/93	5/1/93	32	2	Yes	10,293,870	10,260,999
715	Telecommunications Relay Service	Switched	6/11/93	7/26/93	45	0	Yes	de minimus	de minimus
718	800 Database - Resp Org ID Svc	Switched	6/25/93	8/9/93	45	0	Yes	19,404	18,836
728	DS-3 Port Termination	Special	8/6/93	9/20/93	45	0	Yes	4,804	2,803
739	Billing Name and Address	Other	9/8/93	11/17/93	70	1	Yes	29,316	NA
743	SONET - Ameritech OC-3/OC-12	Special	9/23/93	11/7/93	45	0	Yes	2,698,089	1,793,651
754	Switched Access ECCS	Switched	11/18/93	2/16/94	90	0	Yes	NA	NA
758	900 Blocking	Other	12/10/93	2/8/94	60	0	Yes	0	0
760	Feature Group A DID	Switched	12/17/93	1/31/94	45	0	Yes	83,685	37,248
762	Alternate Card Access (ACA)	Switched	12/17/93	1/31/94	45	0	Yes	de minimus	de minimus
769	PSDS 4-Wire DAL	Special	1/19/94	3/5/94	45	0	Yes	71,513	38,678
771	Diverse Riser	Other	1/25/94	3/12/94	46	1	Yes	de minimus	de minimus
779	Route Survivability	Special	2/18/94	4/4/94	45	0	Yes	79,920	42,375
785	128/256 KBPS Transport Options	Special	3/28/94	5/12/94	45	0	Yes	219,860	172,079
790	SS7 Translation Non-Recurring Charge	Switched	4/21/94	6/5/94	45	0	Yes	3,000	2,769
792	Autotransfer	Other	4/22/94	6/6/94	45	0	Yes	167,616	156,732
797	Dedicated Ring	Special	6/13/94	7/28/94	45	0	Yes	14,773,080	5,613,608
804	LT-3 Optical	Switched	7/1/94	8/15/94	45	0	Yes	3,099,600	2,430,869
806	ANRS Enhancement	Special	7/8/94	8/22/94	45	0	Yes	2,900	16
812	Digital Video	Special	7/29/94	9/12/94	45	0	Yes	212,832	160,920
823	Tandem Signaling Optional Feature	Switched	9/26/94	12/1/94	66	2	Yes	150,048	94,919
830	Dual Carrier Tandem Routing	Switched	11/2/94	12/7/94	35	0	Yes	NA	NA
831	Multiplexer X-Connection	Special	11/4/94	12/19/94	45	0	Yes	4,700	3,743
836	Inward Assistance	Switched	11/14/94	12/29/94	45	0	Yes	368,539	194,166
846	500 Access Service	Switched	12/2/94	1/28/95	57	1	Yes	6,912,500	6,054,566
852	OC-48	Special	12/22/94	2/5/95	45	0	Yes	16,910,111	NA
860	Enhanced Channel Arrangements	Other	2/3/95	3/20/95	45	0	Yes	2,563	1,894

Trans- mittal No.	Access Service	Category	Date of Filing	Date of Approval	Delay	No. of Refillings	Approved	Estimated First Year Revenue	Estimated First Year Cost
862	OC3/OC12 1+1 Protection	Special	2/9/95	3/26/95	45	0	Yes	226,200	122,391
869	9600 Baud SMDI	Other	3/6/95	4/20/95	45	0	Yes	430,800	303,424
875	Ameritech Transaction Service	Other	4/10/95	6/24/95	75	1	Yes	716,049	28,620
879	Ameritech Prepaid Calling Card (APCC)	Switched	4/21/95	6/19/95	59	1	Yes	de minimus	de minimus
883	Ameritech SuperTrunking Video Svc	Special	5/10/95	6/24/95	45	0	Yes	560,173	441,967
892	CIP Optional Feature	Switched	6/20/95	8/18/95	59	1	Yes	643,776	537,610
898	Shared Facilities Credit	Special	6/30/95	8/14/95	45	0	Yes	39,600	38,832
911	DA Call Completion	Other	8/16/95	9/30/95	45	0	Yes	178,049	135,858
912	900 Access Service	Switched	8/25/95	10/9/95	45	0	Yes	116,130	105,219
922	Multichannel Video Service	Special	10/16/95	11/30/95	45	0	Yes	1,749,702	1,314,106
937	Advanced Video Service	Other	1/9/96	2/23/96	45	0	Yes	336,240	130,563
949	SONET Xpress Service	Special	2/23/96	5/23/96	90	1	Yes	17,016,193	NA
955	Wideband Analog Video Service	Special	3/8/96	4/22/96	45	1	Yes	NA	NA
959	OC-48; Thru-Connect	Other	3/25/96	5/9/96	45	0	Yes	395,941	NA
969	Ameritech Frame Relay	Other	5/6/96	6/20/96	45	0	Yes	13,008,302	9,170,754
978	Internat'l Blocking Svcs for business customers	Other	6/21/96	7/26/96	35	0	Yes	de minimus	de minimus
987	Serial Component Video Service	Special	8/1/96	9/15/96	45	0	Yes	118,332	64,905
1004	Direct Drop Node for Dedicated Ring	Special	9/6/96	12/16/96	101	4	Yes	819,020	NA
1014	Optical OC-12 interface	Special	10/10/96	12/8/96	59	1	Yes	566,508	NA
1035	Restricted Call Access and Outgoing Only	Other	12/16/96	1/30/97	45	0	Yes	30,189	NA
1045	ACOI Space Reservation	Other	1/10/97	2/25/97	46	1	Yes	539,508	339,890
1062	1+1 Customer Premises Survivability	Special	2/18/97	3/5/97	15	0	Yes	324,940	NA
1065	Frame Relay options	Other	2/25/97	3/12/97	15	0	Yes	1,945,405	1,227,078
1081	SONET Xpress Switched Transport	Switched	4/16/97	5/1/97	15	0	Yes	4,112,755	NA
1086	3rd and 4th Audio Channel	Special	4/30/97	5/15/97	15	0	Yes	2,500	1,419
1088	Frame Relay options	Other	5/6/97	5/21/97	15	0	Yes	499,820	304,306
1091	ProfitMaster	Other	5/19/97	6/3/97	15	0	Yes	316,680	243,029
1097	PIC Verification	Other	5/23/97	6/7/97	15	0	Yes	912,000	656,640

Appendix 6: List of New Services in Ameritech Indiana's State Tariff

This appendix contains the new services introduced by Ameritech Indiana during the study period (July 1991 to June 1997).

<i>Service</i>	<i>File Date</i>	<i>Effective Date</i>	<i>Approval Delay (raw)</i>	<i>Approval Delay (adjusted)</i>
OPTINET 64 Kbps	11/14/91	2/5/92	83	37
Value Calling Plan - 3	12/30/91	2/12/92	44	10
OCCP	9/1/92	12/1/92	91	43
Centrex Custom Calling Features	9/30/92	2/3/93	126	68
OPTINET DS1 384 Kbps	10/15/92	1/6/93	83	37
ISDN Prime	11/25/92	6/30/93	217	133
ISDN Data Usage	11/25/92	6/30/93	217	133
ISDN Direct	11/25/92	6/30/93	217	133
ISDN Centrex	11/25/92	6/30/93	217	133
On Time Installation Plan	12/29/92	7/14/93	197	119
RCC Type 2	3/29/93	9/8/93	163	95
Caller ID w/ Name	11/19/93	1/2/94	44	9
800 DA	5/11/94	6/23/94	43	9
Billings Reports	7/27/94	7/28/94	1	0
Toll Restriction - Residential	9/8/94	9/13/94	5	2
Ameritech Area Wide Networking	9/15/94	9/19/94	4	1
Scan Alert New Features	10/13/94	10/15/94	2	1
High Voltage Protection Service	10/28/94	10/31/94	3	0
128 & 256 Kbps (Fractional DS1)	10/28/94	10/31/94	3	0
ISDN Direct New Features	10/28/94	11/7/94	10	5
Ameritech ISDN Prime New Features	11/3/94	11/7/94	4	1
2-Way DID w/ Call Transfer	11/9/94	11/15/94	6	3
Answer Supervision w/ Line Side Intrfc	11/14/94	11/15/94	1	0
Ameritech Digital Transport Service	1/17/95	1/18/95	1	0
Ameritech Advanced Video Service	2/3/95	2/6/95	3	0
Value Link & Value Link Plus	2/15/95	2/19/95	4	1
PSN Services	2/24/95	2/27/95	3	0
Business Call Forwarding - Temporary	3/3/95	3/6/95	3	0
Intercept Referral Extension	3/16/95	3/20/95	4	1
Pay Per Use - ACCF	5/31/95	6/1/95	1	0
Ameritech Call Control	7/7/95	7/10/95	3	0
FlexLine	9/15/95	9/18/95	3	0
Area Wide Calling	9/25/95	10/16/95	21	14
Prepaid Card	12/11/95	12/15/95	4	3

Table Note: "Approval Delay (adjusted)" is the number of business days after filing that the tariff was effective, less the minimum required waiting period.

Appendix 7: List of Promotional Offerings in Ameritech Indiana's State Tariff

This appendix contains the promotional offerings introduced by Ameritech Indiana during the study period (July 1991 to June 1997). All of them were during Opportunity Indiana.

Service	File Date	Effective Date	Approval Delay (adjusted)	Filing Process	Notes
Central Office Optional Line	6/30/94	7/4/94	1	1 day	
Residence Exchange Access Lines	8/10/94	8/12/94	1	1 day	Wvr of NRC for add'l lines
Custom 800	9/2/94	9/6/94	1	1 day	Wvr of NRC & usage
Business Exchange Access Lines	9/8/94	9/11/94	1	1 day	Wvr of NRC - add'l ins
Business Exchange Access Lines	10/20/94	10/22/94	1	1 day	Wvr of install charges
Residence Exchange Access Lines	11/22/94	11/23/94	0	1 day	Wvr of NRC - add'l ins
Custom 800 - 800 Calling Option	12/28/94	1/1/95	2	1 day	Wvr of NRC
Business Central Office Opt. Line Feat.	12/28/94	1/3/95	3	1 day	Wvr of 30 day RC
Residence Custom Calling Features	2/13/95	2/14/95	0	1 day	Wvr of RC
Residence Adv. Customer Calling Feat.	2/13/95	2/14/95	0	1 day	Wvr of RC and NRC
Business Central Office Opt. Line Feat.	2/15/95	2/19/95	2	1 day	Wvr of RC
OPTINET DS1 and Base Rate Service	2/28/95	3/1/95	0	1 day	
Business Advanced Custom Calling, CO Line Features, Call Forwarding (Temp., RCF)	3/3/95	3/7/95	1	1 day	Wvr of RC and NRC
Business Custom Calling, LineBacker and Exchange Access	3/3/95	3/7/95	1	1 day	Wvr of RC and NRC
Residence Call Waiting	3/23/95	3/28/95	2	1 day	Wvr of up to 1 mo. RC if cust. not satisfied
Residence Automatic Callback	3/23/95	3/28/95	2	1 day	Wvr of up to 1 mo. RC if cust. not satisfied
Custom 800 - 800 Calling Option	4/6/95	4/10/95	0	3 day	Wvr of NRC, usage
Residence Exchange Access Lines	4/6/95	4/10/95	1	1 day	\$50 bill credit
Custom 800	4/28/95	5/3/95	0	3 day	Wvr NRC and usage
Business Remote Call Forwarding	4/28/95	5/3/95	2	1 day	Wvr NRC
Business Call Forwarding - Temp	5/19/95	5/22/95	0	1 day	Wvr of NRC
Residence Line Backer	5/30/95	6/1/95	1	1 day	Package rate of multi- residence
Semi-Pub Promotion	5/31/95	6/1/95	0	1 day	Promo
Residence Custom Calling Features	6/19/95	6/20/95	0	1 day	Wvr of RC
Residence Adv Custom Calling, CO Line Features, Call ID svc	6/19/95	6/20/95	0	1 day	Wvr of NR and NRC
Business CO Line Features	6/30/95	7/1/95	0	1 day	Wvr of NR
Residence LineBacker	7/21/95	7/24/95	0	1 day	Wvr of RC and NRC
Custom 800	7/28/95	8/1/95	0	3 day	Wvr NRC.
Business Caller ID w/Names	7/28/95	8/1/95	1	1 day	Wvr RC
Business Custom Calling, LB, add'l lines	9/15/95	9/18/95	0	1 day	Wvr 1 mo. RC and NRC
Business Adv Custom Calling, CNS, RCF, Call ID svc and FlexLine	9/15/95	9/18/95	0	1 day	Waiver one month's RC and NRC

Service	File Date	Effective Date	Approval Delay (adjusted)	Filing Process	Notes
Area Wide Calling	9/25/95	10/16/95	0	21 day	Wvr NRC (new svc)
Ameritech ValueLink Plus	9/28/95	10/1/95	0	3 day	
Residence Add'l Lines	10/5/95	10/8/95	1	1 day	Wvr NRC
976	10/13/95	10/16/95	0	1 day	Promo
Scan Alert	11/14/95	11/15/95	0	1 day	
Semi-Pub Promotion	12/28/95	1/1/96	1	1 day	Promo
Residence Call Forwarding	1/5/96	1/8/96	0	1 day	Wvr one month's RC
Residence CNS, Automatic Callback, CNAM	1/5/96	1/8/96	0	1 day	Wvr one month's RC
Business exchange access line	1/11/96	1/15/96	1	1 day	Wvr NRC for add'l lines
Business CNAM and FlexLine	1/11/96	1/15/96	1	1 day	Wvr NRC (Flexline), one mo. RC (CNAM)
Residence Exchange Access Line	2/29/96	3/1/96	0	1 day	Wvr NRC for add'l line
Residence CNAM, CO Optional Features and Auto Callback	4/12/96	4/15/96	0	1 day	Wvr one month's RC
Residence 3-Way and Call Forwarding	4/12/96	4/15/96	0	1 day	Wvr one month's RC
Business ACCF, RCF, CO Optional Features, Custom 800, CF - Temp	4/12/96	4/15/96	0	1 day	Wvr one month's RC
Business CCF, and LineBacker and Exchange Access Lines	4/12/96	4/15/96	0	1 day	Wvr one month's RC on features and NRC for add'l line
Optinet DS1, Base Rate Svcs	5/22/96	5/24/96	1	1 day	Wvr NRC
Oper. surcharge Station-to-Station 3rd. number billed	5/30/96	5/31/96	0	1 day	
Residence CCF	5/31/96	6/1/96	0	1 day	Wvr one month's RC
Residence ACCF and CNS	5/31/96	6/1/96	0	1 day	Wvr one month's RC
Business Remote Call Forwarding	6/12/96	6/13/96	0	1 day	Wvr NRC
Residence Call ID	8/15/96	8/19/96	1	1 day	Wvr one month's RC
Residence Speed Calling	8/15/96	8/19/96	1	1 day	Wvr one month's RC
Residence CF 3-Way Calling	8/22/96	9/1/96	6	1 day	Wvr one month's RC
Residence Exchange Access Line	9/13/96	9/16/96	0	1 day	Wvr of 1/2 NRC
Residence & Business Call ID	9/27/96	10/1/96	1	1 day	Wvr one month's RC
Residence Exchange Access Lines	11/4/96	11/6/96	1	1 day	\$25 credit
Enh. Ameritech ValueLink Plus	12/30/96	1/1/97	0	3 day	For IACT members
Enh. Ameritech ValueLink Plus	1/3/97	1/7/97	0	3 day	Credit on 12th bill
Caller ID w/Name, CNSs	1/3/97	1/6/97	0	1 day	Wvr 3rd month rate
Residence Exchange Access Service	2/12/97	2/13/97	0	1 day	\$47 credit coupon
CNAM, CNS	3/14/97	3/17/97	0	1 day	Wvr 3rd month RC
Custom 800	3/14/97	3/15/97	0	1 day	Wvr one month's RC
Enh. Ameritech ValueLink Plus (800/888)	4/4/97	4/7/97	0	3 day	Coupon for 2 months recurring price
Remote Call Forwarding	5/9/97	5/10/97	0	1 day	Wvr NRC

Table Note: "Approval Delay (adjusted)" is the number of business days after filing that the tariff was effective, less the minimum required waiting period.